

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MIRROR LAKE	Lake Area (ha):	15.01
Town: WOODSTOCK	Maximum depth (m):	10.0
County: Grafton	Mean depth (m):	4.7
River Basin: Merrimack	Volume (m <sup>3</sup> ):	707000
Latitude: 43°56'41" N	Relative depth:	2.3
Longitude: 71°41'38" W	Shore configuration:	1.02
Elevation (ft): 695	Areal water load (m/yr):	5.39
Shore length (m): 1400	Flushing rate (yr <sup>-1</sup> ):	1.10
Watershed area (ha): 124.3	P retention coeff.:	0.64
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

4 February 1997

14 August 1996

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	SYNURA 50%
	#2		CHRYOSOPHAERELLA 37%
	#3		DINOBRYON 13%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.03
DOM. ZOOPLANKTON (% TOTAL)	#1	CYCLOPOID COPEPOD 43%	KELICOTTIA 29%
	#2	BOSMINA 29%	KERATELLA 21%
	#3	(ALL ZOOPLANKTON SPARSE)	
ROTIFERS/LITER		2	36
MICROCRUSTACEA/LITER		5	27
ZOOPLANKTON ABUNDANCE (#/L)		7	66
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			6.9
BOTTOM DISSOLVED OXYGEN (mg/L)		8.2	1.7
BACTERIA (E. coli, #/100 ml)	#1		6
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.5  
Hypolimnion volume (m<sup>3</sup>) : 30000  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: MIRROR LAKE

Town: WOODSTOCK

	4 February 1997		14 August 1996		
DEPTH (m)	3.0	6.0	2.0	5.5	8.5
pH (units)	6.0	6.0	7.0	6.9	6.2
A.N.C. (Alkalinity)	3.3	3.4	3.9	3.6	5.3
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.15	0.14	0.19	< 0.10	0.29
TOTAL PHOSPHORUS	0.003	0.010	0.004	0.007	0.012
CONDUCTIVITY ( $\mu$ mhos/cm)	32.8	33.3	31.4	32.1	37.0
APPARENT COLOR (cpu)	6	6	15	15	25
MAGNESIUM			0.46		
CALCIUM			2.1		
SODIUM			2.2		
POTASSIUM			< 0.40		
CHLORIDE	< 2	< 2	3		3
SULFATE	4	4	4		4
TN : TP	50	14	48		24
CALCITE SATURATION INDEX			3.4		

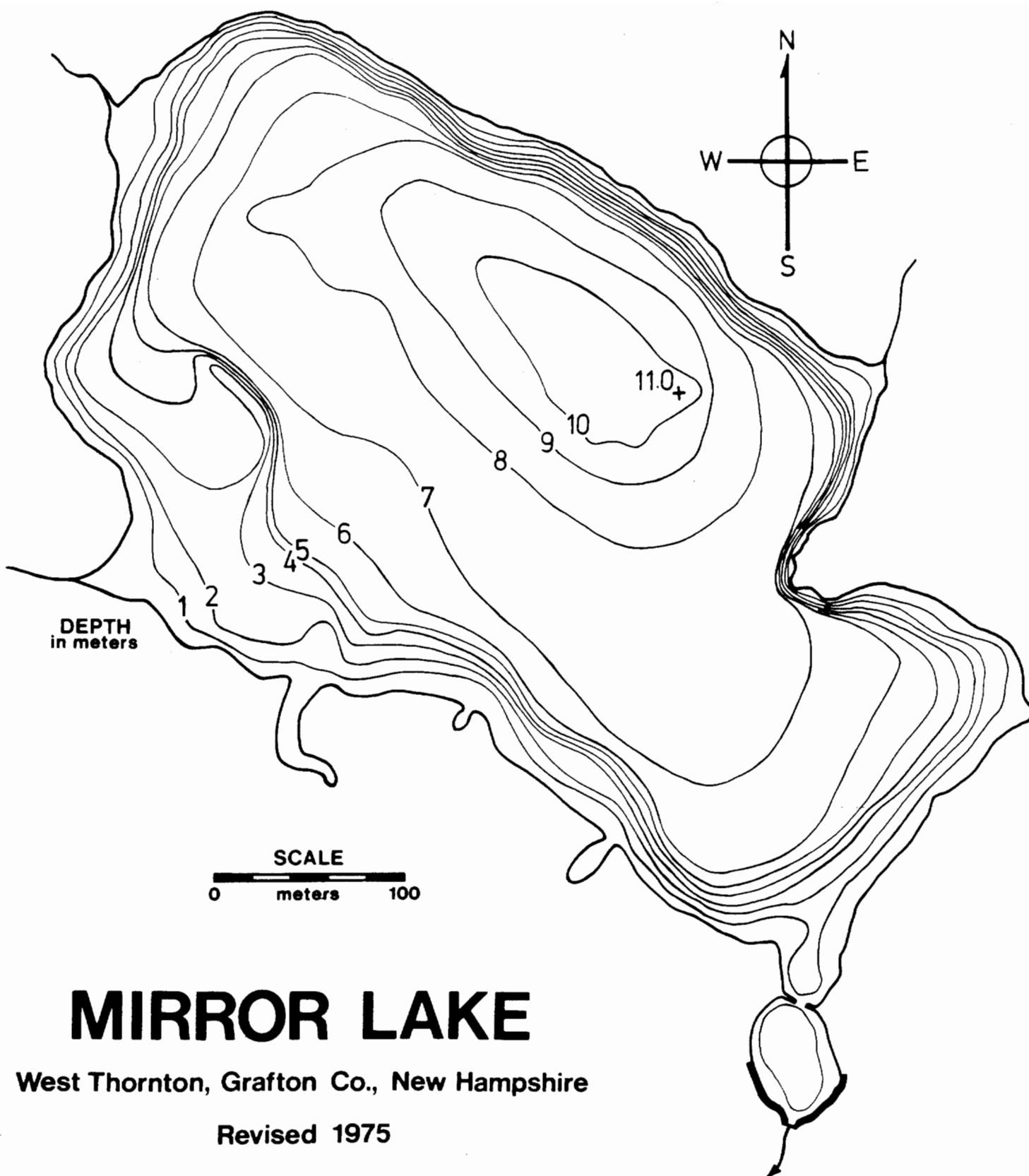
All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1996**

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
1	1	2	1	5	Oligo.

**COMMENTS:**

1. Mirror Lake is located on the edge of the White Mountain National Forest. Several private residences were located on the western shore, a town beach was at the southern end near the outlet cove, and much of the north and eastern shoreline is part of the National Forest, acquired in 1987.
2. The lake is adjacent to the Hubbard Brook Experimental Station and various scientists connected with the station have conducted research on the lake. Professor Gene Likens wrote a history of the lake in the early 1970's in *Appalachia* and we have included a detailed bathymetric map from a 1988 Hubbard Brook publication list.
3. Motor boats are not allowed on Mirror Lake.
4. Mirror Lake is a clear water, nutrient-poor oligotrophic lake.



# MIRROR LAKE

West Thornton, Grafton Co., New Hampshire

Revised 1975

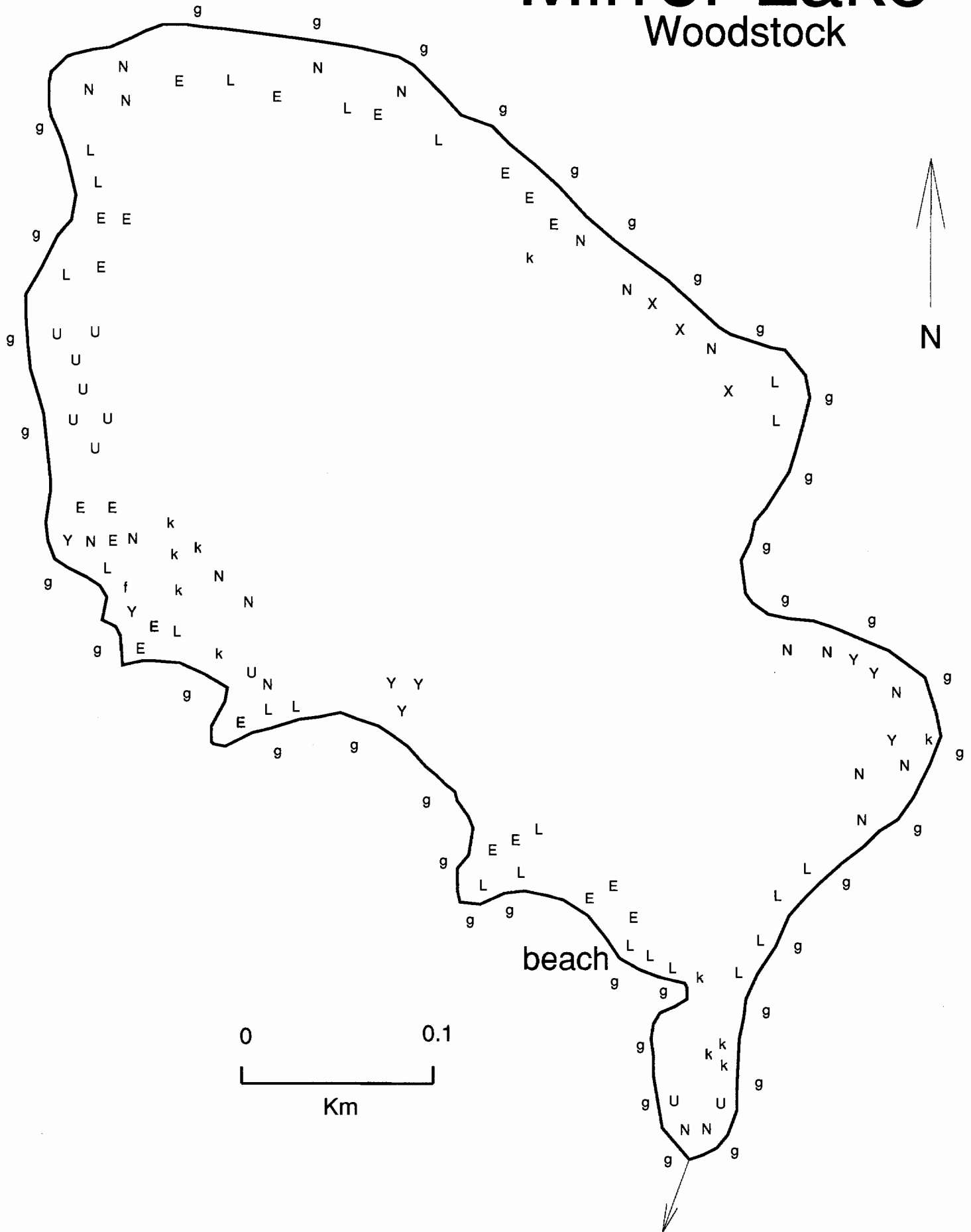
from: Publications of the Hubbard Brook  
Ecosystem Study

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# Mirror Lake

## Woodstock



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